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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the

application:

LISTING OF CLAIMS:

1. (currently amended): A producing-method for producing aminopyrrolidine derivatives \underline{of}

 $\underline{\text{formula (I).}} \text{ or salts thereof, comprising reaction steps 1 and 2,} \underline{\text{wherein the indole derivative in}}$

reaction step 1 is not substituted at the 3-position in the presence of a synthon of formaldehyde

represented by the following reaction formula (I) and wherein with the proviso that reaction step

2 is unnecessary if both R^1 and R^2 are hydrogen-:

(I)

wherein

 R^1 and R^2 represent independently hydrogen or a protecting group for amino group (wherein R^1 and R^2 may, taken together, form a cyclic structure);

R³ represents hydrogen or C1-C6 alkyl;

 \dot{R}^{12}

R11 represents hydrogen, C1-C6 alkyl or C2-C7 alkanoyl;

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 R^{12} , R^{14} , R^{15} , R^{16} and R^{17} represent independently hydrogen, halogen, optionally halogenated C_1 – C_6 alkyl, optionally halogenated C_1 – C_6 alkoxy, hydroxyl or C_2 – C_7

alkoxycarbonyl; and

 R^{23} , R^{24} , R^{25} and R^{26} represent independently hydrogen, halogen, optionally halogenated C_1 – C_6 alkyl, optionally halogenated C_1

wherein the synthon of formaldehyde is at least one selected from the group consisting of formalin, paraformaldehyde and trioxane.

- 2. (original): The production method according to claim 1, wherein the protecting group for amino group as R^1 or R^2 is methoxycarbonyl, *t*-butoxycarbonyl, benzyloxycarbonyl, allyloxycarbonyl, formyl, acetyl, benzoyl, methyl, ethyl, allyl, benzenesulfonyl or phthaloyl, wherein, when said protecting group for amino group contains an aromatic ring, the aromatic ring may be optionally substituted with one or more of nitro, amino, C_1 – C_6 alkyl, C_1 – C_6 alkoxy or halogen.
- 3. (original): The production method according to claim 1, wherein either of R^1 and R^2 is hydrogen and the other is *t*-butoxycarbonyl.
- 4. (canceled).
- 5. (canceled).
- 6. (canceled).

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7. (previously presented): The production method according to claim 1, wherein reaction step 2 is removal of the protection group for the amino group by acid hydrolysis.

- 8. (previously presented): The production method according to claim 1, wherein reaction step 2 involves treatment with hydrogen chloride in organic solvent.
- 9. (currently amended): A method for producing aminopyrrolidine derivatives or salts thereof, comprising a condensation step represented by the following reaction formula (II), wherein the condensation step is performed by treatment with an anthranilic acid derivative in an-mixed solvent of aprotic solvent and C_{1.3} alcohol solvent-in the presence of a condensing agent:

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wherein

R3 represents hydrogen or C1-C6 alkyl;

R11 represents hydrogen, C1-C6 alkyl or C2-C7 alkanoyl;

R12, R14, R15, R16 and R17 represent independently hydrogen, halogen, optionally

halogenated C₁-C₆ alkyl, optionally halogenated C₁-C₆ alkoxy, hydroxyl or C₂-C₇

alkoxycarbonyl; and

R²³, R²⁴, R²⁵ and R²⁶ represent independently hydrogen, halogen, optionally halogenated

C1-C6 alkyl, optionally halogenated C1-C6 alkoxy or hydroxyl.

10. (original): The production method according to claim 9, wherein the condensing agent is one

or more of a compound selected from 1,3-dicyclohexylcarbodiimide, isobutyl chloroformate,

pivaloyl chloride, isovaleryl chloride, 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide,

1-cyclohexyl-3-morpholinoethylcarbodiimide,

1-cyclohexyl-3-(4-diethylaminocyclohexyl)carboximide, N,N-carbonyldiimidazole and

2-chloro-1,3-dimethylimidazolinium chloride.

11. (original): The production method according to claim 9, wherein the condensing agent is

1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride.

12. (previously presented): The production method according to claim 9, wherein, in said

condensation step, are additionally used one or more of an additive selected from p-nitrophenol,

hydroxysuccinimide, hydroxyphthalimide, 1-hydroxy-1,2,3-benzotriazole, 3-hydroxy-4-oxo-3,4-

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dihydro-1,2,3-benzotriazine, N-hydroxy-5-norbornene-2,3-dicarboximide and ethyl 2-

hydroxyimino-2-cyanoacetate.

13. (previously presented): The production method according to claim 9, wherein, in said

condensation step, 1-hydroxy-1,2,3-benzotriazole is additionally used as an additive.

 $14.\ (previously\ presented): The\ production\ method\ according\ to\ claim\ 9,\ wherein,\ in\ said$

condensation step, triethylamine is additionally used.

 $15. \ (previously\ presented):\ The\ production\ method\ according\ to\ claim\ 9,\ which\ further$

comprises a deprotection step represented by the following reaction step 4:

wherein R^3 , R^{11} , R^{12} , R^{14} , R^{15} , R^{16} , R^{17} , R^{23} , R^{24} , R^{25} and R^{26} are as defined in reaction formula (II); R^5 and R^6 represent independently hydrogen or a protecting group for amino group (wherein R^5 and R^6 may, taken together, form a cyclic structure) except for the case where R^5 and R^6 are simultaneously hydrogen.

16. (original): The production method according to claim 15, wherein said reaction step 4 involves treatment with hydrogen chloride in organic solvent.

17. (previously presented): The production method according to claim 15, which further comprises an introduction step of an indole derivative represented by the following-reaction step3:

wherein R³, R⁵, R⁶, R¹¹, R¹², R¹⁴, R¹⁵, R¹⁶, R¹⁷, R²³, R²⁴, R²⁵ and R²⁶ are as defined above.

18. (currently amended): The production method according to claim 17, wherein said reaction

step 3 is reaction of an indole derivative having no substituent at the 3-position in the presence of

a synthon of formaldehyde selected from the group consisting of formalin, paraformaldehyde

and trioxane.

19. (original): The production method according to claim 18, wherein the synthon of

formaldehyde is formalin.

20. (original): The production method according to claim 17, wherein said reaction step 3 is

reaction of an indole derivative substituted with a dialkylaminomethyl group at the 3-position.

21. (previously presented): The production method according to claim 17, which further

comprises a removal step of a benzyl group represented by the following reaction step 2:

reaction step 2

HN R³

reaction step 2

HN R³

reaction step 3

$$R^{16}$$

R¹⁶

R¹⁸

R¹⁸

reaction step 4

$$R^{17}$$

reaction step 4

$$R^{17}$$

reaction step 5 + R¹⁶

R¹⁷

R¹⁸

R²⁸

R³

wherein R³, R⁵, R⁶, R¹¹, R¹², R¹⁴, R¹⁵, R¹⁶, R¹⁷, R²³, R²⁴, R²⁵ and R²⁶ are as defined above.

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22. (original): The production method according to claim 21, wherein, in said reaction step 2, a hydrogen source is used in the presence of palladium catalyst.

23. (original): The production method according to claim 22, wherein the hydrogen source is gaseous hydrogen.

24. (currently amended): The production method according to claim 21, which further comprises a condensation step with an amino acid derivative represented by the following reaction step 1:

wherein R³, R⁵, R⁶, R¹¹, R¹², R¹⁴, R¹⁵, R¹⁶, R¹⁷, R²³, R²⁴, R²⁵ and R²⁶ are as defined above.

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25. (original): The production method according to claim 24, wherein, in said reaction step 1, are

used one or more of a condensing agent selected from 1,3-dicyclohexylcarbodiimide, isobutyl

chloroformate, pivaloyl chloride, isovaleryl chloride,

1-ethyl-3-(3-dimethylaminopropyl)carbodiimide, 1-cyclohexyl-3-morpholinoethylcarbodiimide,

1-cyclohexyl-3-(4-diethylaminocyclohexyl)carboximide, N,N-carbonyldiimidazole and

2-chloro-1,3-dimethylimidazolinium chloride.

26. (original): The production method according to claim 24, wherein, in said reaction step 1,

1-ethyl-3-(3-dimethylaminopropyl)carbodiimide is used as a condensing agent.

27. (previously presented): The production method according to claim 24, wherein, in said

reaction step 1, are additionally used one or more of an additive selected from p-nitrophenol,

hydroxysuccinimide, hydroxyphthalimide, 1-hydroxy-1,2,3-benzotriazole, 3-hydroxy-4-oxo-3,4-

dihydro-1,2,3-benzotriazine, N-hydroxy-5-norbornene-2,3-dicarboximide and ethyl 2-

hydroxyimino-2-cyanoacetate.

28. (previously presented): The production method according to claim 24, wherein, in said

reaction step 1, 1-hydroxy-1,2,3-benzotriazole is additionally used as an additive.

29. (previously presented): The production method according to claim 24, wherein, in said

reaction step 1, triethylamine is additionally used.

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30. (previously presented): The production method according to claim 15, wherein the protecting

group for amino group as R⁵ and R⁶ is methoxycarbonyl, t-butoxycarbonyl, benzyloxycarbonyl,

allyloxycarbonyl, formyl, acetyl, benzoyl, methyl, ethyl, allyl, benzenesulfonyl or phthaloyl,

wherein, when said protecting group for the amino group contains an aromatic ring, the aromatic

ring may be optionally substituted with one or more of nitro, amino, $C_1 - C_6$ alkyl, $C_1 - C_6$ alkoxy

or halogen.

31. (previously presented): The production method according to claim 15, wherein either of R⁵

and R⁶ is hydrogen and the other is t-butoxycarbonyl.

32. (previously presented): The production method according to claim 1, wherein R³ is hydrogen.

33. (previously presented): The production method according to claim 1, wherein R¹¹, R¹², R¹⁴,

R15 and R17 are all hydrogen.

34. (previously presented): The production method according to claim 1, wherein R¹⁶ is methyl.

35. (previously presented): The production method according to claim 1, wherein R²³, R²⁴ and

R²⁶ are all hydrogen.

trifluoromethoxy.

36. (previously presented): The production method according to claim 1, wherein R²⁵ is

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(currently amended): A compound or a salt thereof represented by the following formula
 :

wherein

 R^1 is hydrogen and R^2 represent independently hydrogen or is a protecting group for an amino group, or R^1 is a protecting group for an amino group and R^2 is hydrogen for amino group (wherein R^1 and R^2 may, taken together, form a cyclic structure);

R3 represents hydrogen or C1-C6 alkyl;

R4 represents hydrogen or C1-C6 alkyl; and

 R^{23} , R^{24} , R^{25} and R^{26} represent independently hydrogen, halogen, optionally halogenated C_1 – C_6 alkyl, optionally halogenated C_1 – C_6

38. (original): The compound or a salt thereof according to claim 37, wherein said protecting group of amino group as R¹ and R² is methoxycarbonyl, *t*-butoxycarbonyl, benzyloxycarbonyl, allyloxycarbonyl, formyl, acetyl, benzoyl, methyl, ethyl, allyl, benzenesulfonyl or phthaloyl, wherein, when said protecting group for the amino group contains an aromatic ring, the aromatic ring may be substituted with one or more of nitro, amino, C₁-C₆ alkyl, C₁-C₆ alkoxy or halogen.

39. (original): The compound or a salt thereof according to claim 37, wherein either of R¹ and R² is hydrogen and the other is hydrogen, *t*-butoxycarbonyl or benzyloxycarbonyl.

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40. (previously presented): The compound or a salt thereof according to claim 37, wherein R³ is

hydrogen.

41. (previously presented): The compound or a salt thereof according to claim 37, wherein R⁴ is

hydrogen.

42. (previously presented): The compound or a salt thereof according to claim 37, wherein R²³,

R24 and R26 are all hydrogen.

43. (previously presented): The compound or a salt thereof according to claim 37, wherein R²⁵ is

C1-C6 alkoxy substituted with halogen.

44. (previously presented): The compound or a salt thereof according to claim 37, wherein R²⁵ is

trifluoromethoxy.

45. (currently amended): A production-method for producing of an anthranilamide derivative of

formula (IV), or a salt thereof, comprising a-the following reaction step-represented by the

following formula (IV):

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wherein:

 R^1 and R^2 represent independently hydrogen or a protecting group for amino group (wherein R^1 and R^2 may, taken together, form a cyclic structure);

(IV)

R3 represents hydrogen or C1-C6 alkyl;

R4 represents hydrogen or C1-C6 alkyl;

 R^{23} , R^{24} , R^{25} and R^{26} represent independently hydrogen, halogen, optionally halogenated C_1 – C_6 alkoxy or hydroxyl.

46. (original): The production method according to claim 45 which further comprises a reaction step represented by the first step in the following reaction formula:

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wherein R¹, R², R³, R⁴, R²³, R²⁴, R²⁵ and R²⁶ are as defined above.

47. (previously presented): The production method according to claim 45, wherein the protecting group for amino group as R¹ or R² is methoxycarbonyl, *t*-butoxycarbonyl, benzyloxycarbonyl, allyloxycarbonyl, formyl, acetyl, benzoyl, methyl, ethyl, allyl, benzenesulfonyl or phthaloyl, wherein, when said protecting group for the amino group contains

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an aromatic ring, the aromatic ring may be substituted with one or more of nitro, amino, C_1 – C_6 alkeyl, C_1 – C_6 alkey, or halogen.

48. (previously presented): The production method according to claim 45, wherein either of R¹ and R² is hydrogen and the other is hydrogen, t-butoxycarbonyl or benzyloxycarbonyl.

49. (previously presented): The production method according to claim 45, wherein R³ is hydrogen.

50. (previously presented): The production method according to claim 45, wherein R^{23} , R^{24} and R^{26} are all hydrogen.

51. (previously presented): The production method according to claim 45, wherein R^{25} is C_1 – C_6 alkoxy substituted with halogen.

52. (previously presented): The production method according to claim 45, wherein R²⁵ is trifluoromethoxy.

53. (new): A method for producing aminopyrrolidine derivatives of formula (I), or salts thereof, comprising reaction steps 1 and 2, wherein the indole derivative in reaction step 1 has a dialkylaminomethyl group at the 3-position and wherein reaction step 2 is unnecessary if both R¹ and R² are hydrogen:

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wherein

 R^1 and R^2 represent independently hydrogen or a protecting group for amino group (wherein R^1 and R^2 may, taken together, form a cyclic structure);

R³ represents hydrogen or C₁-C₆ alkyl;

R¹¹ represents hydrogen, C₁–C₆ alkyl or C₂–C₇ alkanoyl;

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 $R^{12}, R^{14}, R^{15}, R^{16} \ and \ R^{17} \ represent independently hydrogen, halogen, optionally halogenated C_1-C_6 alkyl, optionally halogenated C_1-C_6 alkoxy, hydroxyl or C_2-C_7 alkoxycarbonyl; and$

 R^{23} , R^{24} , R^{25} and R^{26} represent independently hydrogen, halogen, optionally halogenated C_1 – C_6 alkyl, optionally halogenated C_1 – C_6 alkyl, optionally halogenated C_1 – C_6 alkyl, optionally halogenated C_1 – C_6 alkoxy or hydroxyl.

54. (new): The production method according to claim 53, wherein the protecting group for amino group as R¹ or R² is methoxycarbonyl, *t*-butoxycarbonyl, benzyloxycarbonyl, allyloxycarbonyl, formyl, acetyl, benzoyl, methyl, ethyl, allyl, benzenesulfonyl or phthaloyl, wherein, when said protecting group for amino group contains an aromatic ring, the aromatic ring may be optionally substituted with one or more of nitro, amino, C₁–C₆ alkyl, C₁–C₆ alkoyy or halogen.

55. (new): The production method according to claim 53, wherein either of R¹ and R² is hydrogen and the other is *t*-butoxycarbonyl.

56. (new): The production method according to claim 53, wherein reaction step 2 is removal of the protection group for the amino group by acid hydrolysis.

57. (new): The production method according to claim 53, wherein reaction step 2 involves treatment with hydrogen chloride in organic solvent.